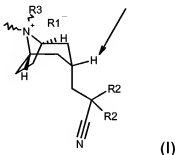


In the Claims:

This listing of claims replaces all prior versions of claims in the application:

1. (currently amended) A compound having structure I as indicated below:



wherein:

R1⁻ represents an anion associated with the positive charge of the N atom; and

R2 is selected from the group consisting of straight or branched chain lower alkyl groups (having preferably from 1 to 6 carbon atoms), cycloalkyl groups (having from 5 to 6 carbon atoms), cycloalkyl-alkyl (having 6 to 10 carbon atoms), heterocycloalkyl (having 5 to 6 carbon atoms) and N or O as the heteroatom, heterocycloalkyl-alkyl (having 6 to 10 carbon atoms) and N or O as the heteroatom, aryl, optionally substituted aryl, heteroaryl, and optionally substituted heteroaryl phenyl;

R3 is selected from the group consisting of (C₂-C₁₂)alkyl, (C₄-C₆)alkenyl, (C₄-C₆)alkyl(C₃-C₆)cycloalkyl, (C₄-C₆)alkyl-phenyl, (C₄-C₆)alkyl-OH, (C₄-C₆)alkyl-CN, (C₄-C₆)alkyl-halogen, (C₄-C₆)alkyl-CF₃, (C₄-C₆)alkyl-OCH₃, (C₄-C₆)alkyl-O-(C₄-C₆)alkyl-OCH₃ and (C₄-C₆)alkyl-O-(C₄-C₆)-aryl. Preferred R3 substituents are in the endo position.

-(C₂-C₁₂)alkyl, -(C₂-C₆)alkenyl, -(C₄-C₆)alkyl(C₃-C₆)cycloalkyl, -(C₄-C₆)alkyl-phenyl, -(C₄-C₆)alkyl-OH, -(C₄-C₆)alkyl-CN, -(C₄-C₆)alkyl-halogen, -(C₄-C₆)alkyl-

CF₃-(C₁-C₆)alkyl-OCH₃, -(C₁-C₆)alkyl-O-(C₁-C₆)alkyl-OCH₃ and -(C₁-C₆)alkyl-O-(C₁-C₆)alkyl-aryl

2. (original) A compound according to claim 1 wherein the H atom indicated is in the exo position.

3. (original) A compound according to claim 1 wherein R1⁻ is selected from the group consisting of chloride, bromide, iodide, sulfate, benzene sulfonate and toluene sulfonate.

4. (currently amended) A compound according claim 1 selected from the group consisting of:

3-*Endo*-3-(2-cyano-2,2-diphenylethyl)-8-(cyclohexylmethyl)-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-(cyclopropylmethyl)-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-8-butyl-3-(2-cyano-2,2-diphenylethyl)-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-8-(4-chlorobutyl)-3-(2-cyano-2,2-diphenylethyl)-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-dodecyl-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-methyl-8-(2-propen-1-yl)-8-azoniabicyclo[3.2.1]octane iodide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-methyl-8-(phenylmethyl)-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-(2-hydroxyethyl)-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-ethyl-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-methyl-8-propyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-(5-hexen-1-yl)-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-methyl-8-(4,4,4-trifluorobutyl)-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-methyl-8-(3-phenylpropyl)-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-(2-cyclohexylethyl)-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-(3-cyanopropyl)-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-methyl-8-[2-(methyloxy)ethyl]-8-azoniabicyclo[3.2.1]octane bromide;

(3-*Endo*)-3-(2-cyano-2,2-diphenylethyl)-8-methyl-8-(2-[(2-(methyloxy)ethyl)oxy]ethyl)-8-azoniabicyclo[3.2.1]octane bromide;

N-(*Endo*)-(3-*endo*)-3-(2-cyano-2,2-diphenylethyl)-(8-*endo*)-8-(5-hexen-1-yl)-8-methyl-8-azoniabicyclo[3.2.1]octane bromide;

~~N-(*Endo*)-(3-*endo*)-(2-cyano-2,2-diphenylethyl)-(8-*endo*)-methyl-8-(2-[(phenylmethyl)oxy]ethyl)-8-azoniabicyclo[3.2.1]octane bromide;~~

N-(*Endo*)-(3-*endo*)-(2-cyano-2,2-diphenylethyl)-(8-*endo*)-8-methyl-8-(2-[(phenylmethyl)oxy]ethyl)-8-azoniabicyclo[3.2.1]octane bromide; and

N-(*Endo*)-(3-*endo*)-(2-cyano-2,2-diphenylethyl)-8-methyl-8-(3-phenylpropyl)-8-azoniabicyclo[3.2.1] octane bromide ;~~and~~

~~N-(*Endo*)-(3-*endo*)-(2-cyano-2,2-diphenylethyl)-(8-*endo*)-8-methyl-8-[3-[(phenyloxy]propyl]-8-azoniabicyclo[3.2.1]octane bromide.~~

5.(currently amended) A pharmaceutical composition for the treatment of muscarinic acetylcholine receptor mediated diseases comprising a compound according to any one of claims ~~claim~~ 1 to 4, and 14 to 37 and a pharmaceutically acceptable carrier thereof.

Claims 6 to 13 (cancelled)

14. (new) The compound according to claim 1 wherein R3 is $-(C_2-C_{12})$ alkyl.
15. (new) The compound according to claim 14 wherein R3 is ethyl, propyl, butyl, or dodecyl.
16. (new) The compound according to claim 1 wherein R3 is $-(C_2-C_6)$ alkenyl.
17. (new) The compound according to claim 16 wherein R3 is 2-propen-1-yl, or 5-hexen-1-yl.
18. (new) The compound according to claim 1 wherein R3 is $-(C_1-C_6)$ alkyl-OH.
19. (new) The compound according to claim 18 wherein R3 is 2-hydroxyethyl.
20. (new) The compound according to claim 1 wherein R3 is $-(C_1-C_6)$ alkyl-CN.
21. (new) The compound according to claim 20 wherein R3 is 3-cyanopropyl.
22. (new) The compound according to claim 1 wherein R3 is $-(C_1-C_6)$ alkyl-halogen.
23. (new) The compound according to claim 22 wherein R3 is 4-chlorobutyl.
24. (new) The compound according to claim 1 wherein R3 is $-(C_1-C_6)$ alkyl-CF₃.
25. (new) The compound according to claim 24 wherein R3 is 4,4,4-trifluorobutyl.
26. (new) The compound according to claim 1 wherein R3 is $-(C_1-C_6)$ alkyl-OCH₃.
27. (new) The compound according to claim 26 wherein R3 is 2-(methyloxy)ethyl.

28. (new) The compound according to claim 1 wherein R3 is -(C₁-C₆)alkyl-O-(C₁-C₆)alkyl-OCH₃.
29. (new) The compound according to claim 28 wherein R3 is (2-[(2-methyloxy)ethyl]oxy)ethyl).
30. (new) The compound according to claim 1 wherein R3 is -(C₁-C₆)alkyl-O-(C₁-C₆)alkyl-aryl.
31. (new) The compound according to claim 31 wherein R3 is -(2-[(phenylmethyl)oxy]ethyl).
32. (new) The compound according to claim 3 wherein R3 is -(C₁-C₆)alkyl-O-(C₁-C₆)alkyl-aryl.
33. (new) The compound according to claim 32 wherein R3 is -(2-[(phenylmethyl)oxy]ethyl).
34. (new) The compound according to claim 1 wherein R3 is -(C₁-C₆)alkyl(C₃-C₆)cycloalkyl.
35. (new) The compound according to claim 34 wherein R3 is cyclohexylmethyl, cyclopropylmethyl, or cyclohexylethyl.
36. (new) The compound according to claim 1 wherein R3 is -(C₁-C₆)alkyl-phenyl.
37. (new) The compound according to claim 36 wherein R3 is benzyl, or phenylpropyl.
38. (new) The pharmaceutical composition according to claim 5 which is a dry powder composition for topical delivery to the lung by inhalation.
39. (new) The pharmaceutical composition according to claim 5 which is an aqueous solution or suspension composition for topical delivery to the lung by inhalation.

40. (new) The compound which is N-(*Endo*)-(3-*endo*)-(2-cyano-2,2-diphenylethyl)-(8-*endo*)-8-methyl-8-[3-[(phenyloxy)propyl]-8-azoniabicyclo[3.2.1]octane bromide.

41. (new) A pharmaceutical composition comprising a compound according to claim 40 and a pharmaceutically acceptable carrier or diluent.